

**I claim:**

**1. A composition with synergistic anti-inflammatory properties in conditions induced by the activation of mast cells, consequent degranulation of said cells and secretion of inflammatory biomolecules, comprising a non-bovine proteoglycan sulfate and an unrefined olive kernel extract ("OKE"), and one or more of a hexosamine sulfate, a flavone, S-adenosylmethionine ("SAM"), a histamine-1 receptor antagonist, a histamine-3 agonist, an antagonist of the actions of Corticotropin Releasing Hormone ("CRH"), a hyaluronate salt, a rutin, a polyamine, and caffeine, in an appropriate excipient or vehicle.**

**2. The composition according to claim 1, wherein said sulfated proteoglycan is selected from the group consisting of non-bovine chondroitin sulfate, keratan sulfate, dermatan sulfate and sodium hyaluronate.**

**3. The composition according to claim 2, wherein said chondroitin sulfate is chondroitin sulfate C derived from shark cartilage.**

**4. The composition according to claim 1, wherein said hexosamine sulfate is D-glucosamine sulfate.**

**5. The composition according to claim 1, wherein said flavone is selected from the group consisting of quercetin, myricetin, genistein and kaempferol.**

**6. The composition according to claim 1, wherein said unrefined kernel extract contains polyphenols and alpha-tocopherol.**

**7. The composition according to claim 1, said composition being for oral use, comprising 10-3,000 mg per capsule or tablet of each of non-bovine chondroitin sulfate C, quercetin and D-glucosamine sulfate, with 900-1200 mg unrefined olive kernel extract.**

8. The composition according to claim 7, further supplemented with 3-1,000 mg of SAM per capsule or tablet.

5           9. A composition according to claim 1, wherein said inflammatory diseases are selected from the group consisting of: arthritis, cancers, fibromyalgia, inflammatory bowel disease, interstitial cystitis, irritable bowel syndrome, migraines, angina, chronic prostatitis, eczema, multiple sclerosis, psoriasis, sun burn, tooth decay, periodontal disease, stressed-induced  
10           migraines, stress-induced opening of bladder mucosa, stress-induced opening of the blood-brain barrier, superficial vasodilator (flush) syndrome, medical devices and hormonally-dependent cancers.

15           10. The composition according to claim 9, wherein said inflammatory disease is arthritis and said composition is for oral administration, comprising non-bovine chondroitin sulfate, OKE, quercetin, D-glucosamine sulfate, and, optionally, sodium hyaluronate.

20           11. The composition according to claim 9, wherein said inflammatory disease is arthritis and said composition is for topical use, comprising, non-bovine chondroitin sulfate, OKE, D-glucosamine sulfate, quercetin, sodium hyaluronate, and bitter willow bark extract.

25           12. The composition according to claim 9 for oral or aerosol use in allergic conditions, comprising non-bovine chondroitin sulfate, OKE and a flavonoid selected from the group consisting of quercetin, myricetin and kaempferol, and, optionally, a histamine-1 receptor antagonist.

30           13. The composition according to claim 9, for topical use in allergic conditions, comprising non-bovine chondroitin sulfate, OKE, myricetin, alpha-

tocopherol, and, optionally, a histamine-1-receptor antagonist.

14. The composition according to claim 13, wherein said antagonist is diphenhydramine, hydroxyzine, azatadine, azelastine or cyproheptadine.

15. The composition according to claim 9 wherein said inflammatory disease is superficial vasodilator "flush" syndrome, said composition comprising a non-bovine proteoglycan, OKE, a flavonoid, bitter willow bark extract, and, optionally, cyproheptadine or azatadine.

16. The composition according to claim 9, wherein said inflammatory disease is multiple sclerosis, said composition comprising non-bovine chondroitin sulfate, OKE, quercetin or myricetin, hydroxyzine, and, optionally, caffeine, SAM and interferon-beta.

17. The composition according to claim 9, wherein said inflammatory disease is migraine headaches, and said composition comprises non-bovine chondroitin sulfate, OKE, quercetin, and azatadine.

18. The composition according to claim 1, said composition being for oral use, comprising 150-300 mg per capsule or tablet of each of non-bovine chondroitin sulfate, quercetin and D-glucosamine sulfate, with 900-1200 mg of OKE, and, optionally, 100-200 mg sodium hyaluronate and/or 100 mg SAM.

19. The composition according to claim 1, said composition consisting of an ointment or cream for topical application, comprising, in % by weight, non-bovine chondroitin sulfate, 5; OKE, 15; D-glucosamine sulfate, 5; quercetin, 3; sodium hyaluronate 5; and, bitter willow bark extract 5.

20. The composition according to claim 19 supplemented by at least

one of the histamine-1 receptor antagonists diphenhydramine, hydroxyzine, azelastine, azatadine, cyproheptadine, each 1-5 mg %.

21. The composition according to claim 1, said composition comprising  
5 a mouth wash composition, consisting of non-bovine chondroitin sulfate and quercetin, each 0.3-0.4 M; OKE, 1% (v/v); and, optionally, at least one of D-glucosamine sulfate, 0.4 M and SAM, 0.15 M, in a mouth wash vehicle.

22. The composition according to claim 1, said composition consisting of  
10 a tooth paste, comprising, in mg%, non-bovine chondroitin sulfate, 5; OKE, 1; quercetin, 3, and, optionally, D-glucosamine sulfate, 5, in a tooth paste vehicle.

23. The composition according to claim 1, said composition  
15 consisting of a sunscreen composition, comprising, in mg%, non-bovine chondroitin sulfate, 5; OKE, 10; quercetin 3; and at least one of D-glucosamine sulfate, 5, and titanium dioxide, 5, in a sun screen vehicle.

24. The composition according to claim 1, for use in treating migraine  
20 headaches, said composition comprising, in mg, non-bovine chondroitin sulfate, 50 ; OKE, 150; quercetin, 100 ; azatadine, 4; and, optionally, a CRH antagonist.

25. The composition according to claim 1, said composition comprising, in  
25 mg, non-bovine chondroitin sulfate, 50; quercetin, 400; hydroxyzine, 50; and, optionally, a CRH antagonist.

26. The composition according to claim 1, said composition comprising,  
in mg, non-bovine chondroitin sulfate, 100; OKE, 900-1200; D-glucosamine sulfate, 50; and quercetin, 100.

27. The composition according to claim 1, comprising, in mg%, non-

bovine chondroitin sulfate, 5; OKE, 900-1200; D-glucosamine sulfate, 5; and quercetin, 3.

28. The composition according to claim 1, wherein said inflammatory  
5 disease is cancer and wherein said composition is designed for oral use, comprising 25-50 mg of genistein and 150-300 mg of quercetin, and 900-1200 mg OKE.

29. The composition according to claim 1, wherein said inflammatory  
10 disease is atherosclerosis with or without myocardial ischemia, comprising 100-300 mg each of non-bovine chondroitin sulfate, myricetin, folic acid and SAM, and 900-1200 mg OKE, in a vehicle for oral use.

30. The composition according to claim 1, wherein said inflammatory  
15 disease is interstitial cystitis or prostatitis, said composition comprising, in mg, 100-300 of non-bovine chondroitin sulfate, 900-1200 of OKE, 50-300 D-glucosamine sulfate, 100-300 of sodium hyaluronate, 100-400 quercetin, in a vehicle for oral use.

31. The composition according to claim 1, wherein said inflammatory  
20 disease is multiple sclerosis, said composition comprising, in mg, 50-300 each of non-bovine chondroitin sulfate, myricetin, hydroxyzine and SAM, 900-1200 of OKE, and, optionally, interferon-beta, in a vehicle for oral use.

32. The composition according to claim 1, said composition comprising, in  
25 mg, non-bovine chondroitin sulfate 200; OKE, 450; myricetine, 200; and diphenhydramine, 5 mg.

33. The composition according to claim 1, said composition comprising, in  
30 mg, non-bovine chondroitin sulfate, 50; OKE, 900-1200; kaempferol, 100; SAM, 50;

**folic acid, 50; and niacin, 100.**

**34. The composition according to claim 1, wherein said inflammatory disease is superficial vasodilation flush syndrome, said composition comprising**  
5 **50 mg non-bovine chondroitin sulfate; OKE, 450 mg; 350 mg quercetin, 5% by weight bitter willow bark extract, and, optionally, 4 mg cyproheptadine or azatadine.**

10 **35. The composition according to claim 1, wherein said inflammatory disease is skin allergy, said composition comprising, in % by weight, 5 each of aloe vera, non-bovine chondroitin sulfate and alpha-tocopherol, 15 of OKE, and, optionally, azelastine.**

15 **36. The composition according to claim 1, wherein said inflammatory disease in allergy or allergic asthma, comprising 200 mg of myricetin, 200 mg of non-bovine chondroitin sulfate, and, optionally, azelastine or hydroxyzine.**

20 **38. The composition according to claim 1, wherein said inflammatory disease is a hormonally-dependent cancer, comprising, in mg, non-bovine chondroitin sulfate, 150; OKE, 450; quercetin, 250; genistein, 50; and, optionally, 10 tamoxifen or raloxifen.**

25 **39. The composition according to claim 1, wherein said inflammatory disease is allergic conjunctivitis, comprising quercetin, 0.05%; non-bovine chondroitin sulfate, 2.0%; OKE, 0.001%; and, optionally, azelastine 0.05%.**